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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,077	10/01/2003	Martin S. Scolaro	459900	8342

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EXAMINER
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TRAN, CHUC

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/677,077	Applicant(s) SCOLARO ET AL.	
	Examiner Chuc D. Tran	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-3, 6-8, 12, 18, 20-23 and 25 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 9-11, 19 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/26/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims 1-4, 8-9, 11, 18-19, 22-23 and 25. Therefore, the “temperature-sensing circuit” in claims 1-3, 8-9 and 11; the “circuitry” in claims 2 and 4; the “RC circuit” in claim 3; the “temperature response means” in claims 18 and 19; and a “send temperature” in claims 22-23 and 25 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Regarding claim 1, Hochstein disclose a drive circuit for a lamp in Fig. 3, comprising:

- an electronic switch (46) connected in series with a lamp (20) and a source of DC voltage (16) and having a control input terminal (R3), and
- a pulse-width-modulation (PWM) control circuit (40) having an input connectable to the source of DC voltage (16) and an output connected to the control input terminal (R3) of the electronic switch for varying lamp brightness in proportion to the PWM duty cycle (Col. 2, Line 3), the control circuit including a temperature-sensing circuit (36) for reducing the PWM duty cycle when lamp temperature exceeds a predetermined temperature (Col. 5, Line 8-14).

Regarding claim 2, Hochstein disclose in Fig. 3 that the control circuit includes a timing circuit (42) and the temperature-sensing circuit includes circuitry for altering impedance of the timing circuit (Col. 4, Line 31).

Regarding claim 3, Hochstein disclose in Fig. 3 that the timing circuit includes an RC circuit and the impedance altered by the temperature-sensing circuit is in a capacitance discharge circuit (Col. 4, line 43).

Regarding claim 6, Hochstein disclose that an adjustment circuitry (10) for automatically adjusting a control voltage of the control circuit in response to a change in the voltage of the source (Col. 3, Line 66) and (Col. 4, Line 1-5).

Regarding claim 7, Hochstein disclose that the adjustment circuitry includes a supply voltage-dependent voltage regulator (24) for maintaining a constant operating voltage for the control circuit irrespective of the voltage of the source (Col. 7, Line 5-7).

Regarding claim 8, Hochstein disclose in Fig. 3, a portable spotlight comprising:

- a lamp (20); and

***Claim Objections***

2. Claim 8 is objected to because of the following informalities:

Claim 8, line 4, "a lamp" should be changed to - - the lamp - -.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. Claims 2 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "circuitry" is indefinite because it is not clear if patentability is based on there being "altering impedance of the timing circuit". Applicant is encouraged to implement this type of language in the interest of improving it's clarity.

***Allowable Subject Matter***

4. The indicated allowability of claims 1-12 and 18-21 are withdrawn in view of the newly discovered reference(s) to Hochstein (USP. 5,012,392). Rejections based on the newly cited reference(s) follow.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 6-8, 12, 18, 20-23 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hochstein (USP. 5,012,392).

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- a drive circuit (24) connected to the lamp, the drive circuit including an electronic switch (46) connected in series with the lamp and a source of DC voltage (16) and having a control input terminal, and a pulse-width-modulation (PWM) control circuit (40) having an input connectable to the source of DC voltage and an output connected to the control input terminal of the electronic switch (46) for varying lamp brightness in proportion to the PWM duty cycle (Col. 2, Line 3), the control circuit including a temperature-sensing circuit (36) for reducing the PWM duty cycle when lamp temperature exceeds a predetermined temperature (Col. 5, Line 8-14).

Regarding claim 12, Hochstein disclose that an integrated circuit timer configured as an astable multivibrator (Col. 4, line 24).

Regarding claim 18, Hochstein disclose a drive circuit in Fig. 3 for a lamp comprising:

- electronic switch means (46) connected to a lamp (20) for controlling current flow through the lamp from a DC source (16) (Abstract) and having a control input terminal (R3), and control means (40) connected to the control input terminal of the switch means for pulse width-modulation (PWM) of the switch means for varying lamp brightness in proportion to PWM duty cycle (Col. 2, line 36-49), the control means including temperature-responsive means (36) for reducing the PWM duty cycle when lamp temperature exceeds a predetermined temperature (Col. 5, Line 10-14).

Regarding claim 20, Hochstein disclose that the control means includes selectively operable brightness selection means (Col. 7, Line 15).

Regarding claim 21, Hochstein disclose that adjustment means (24) coupled to the control means (40) for automatically adjusting the control voltage in response to changes in the voltage of the DC source (Col. 3, Line 66) and (Col. 4, Line 1-5).

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Claims (method) 22-23 and 25, given the apparatus of the drive circuit for the lamp as applied to claims 1-12 and 18-21 (apparatus), the method for the apparatus as claimed in claims 22-23 and 25 is inherent.

Regarding claim 22, Hochstein disclose the method of protecting a lamp circuit from overheating in Fig. 3, comprising: pulse-width-modulating (40), a supply voltage (16) for controlling lamp brightness (Col. 3, Line 65), sensing lamp circuit temperature (36), and reducing the duty cycle of pulse width modulation in response to a sensed temperature exceeding a predetermined temperature (Col. 5, line 10-14), the pulse-width-modulating including connecting an electronic switch (46) in series with the lamp and pulse-width-modulating a signal at a control terminal of the switch (Col. 4, Line 49).

Regarding claim 23, the method of protecting a lamp circuit from overheating in Fig. 3, comprising: pulse-width-modulating (40), a supply voltage (16) for controlling lamp brightness (Col. 3, Line 65), sensing lamp circuit temperature (36), and reducing the duty cycle of pulse width modulation in response to a sensed temperature exceeding a predetermined temperature by altering a resistance in a timing circuit (42) (Col. 5, line 10-14).

Regarding claim 25, Hochstein disclose the method of protecting a lamp circuit from overheating in Fig. 3, comprising: pulse-width-modulating (40), a supply voltage (16) for controlling lamp brightness (Col. 3, line 65), automatically adjusting the duty cycle of pulse width modulation in response to changes in the supply voltage (Col. 3, line 34), sensing lamp circuit temperature (36), and reducing the duty cycle of pulse width modulation in response to a sensed temperature exceeding a predetermined temperature (Col. 5, line 10-14).

***Allowable Subject Matter***

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7. Claims 4-5, 9-11, 19 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose the thermal switch as claimed in claims 4-5, 9-11 and 19.

Prior art fails to disclose the altering includes disconnecting one of two parallel resistors as claimed in claim 24.

*Citation of relevant prior art*

Prior art So (USP. 6,307,330) disclose system and method for operating incandescent lamps.

Prior art Li (USP. 6,414,860) disclose current control start up for pulse-width modulated system.

Prior art Yamada (USP. 5,418,435) disclose light controller with overload current protection circuit.

Prior art Seki et al (USP. 5,293,077) disclose power switch circuit.

Prior art Osteen (USP. 4,137,484) disclose color improvement of high pressure sodium vapor lamps.

Prior art Goodale, Jr, et al (USP. 5,894,200) disclose method and apparatus for improving electrical and light producing efficiency in low voltage direct current lamp.

Prior art Carlson et al (USP. 5,015,921) disclose soft start solid state switch.

Prior art Pacholok (USP. 4,904,903) disclose ballast for intensity discharge lamp.

Prior art Konopka (USP. 4,862,013) disclose constant current source and battery charge.



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Prior art Cook, II (USP. 4,902,958) disclose light regulation and intensity controller.

Prior art Kanno (USP. 6,580,059) disclose control apparatus for a light radiation-type rapid heating and processing device.

Prior art Kim et al (USP. 6,841,941) disclose brightness controllable flashlight.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D. Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



TC  
September 18, 2006

TRINH DINH  
PRIMARY EXAMINER